Summer 1997

HeartMEMO

Taking It to the Streets: Community-Based Interventions

People choose behaviors that affect their health because of a number of factors, including social, financial, environmental, and cultural issues. Overcoming cultural barriers and other elements to change behavior in a specific population is an ongoing challenge for health care professionals. Another is intervening to persuade someone to change behavior when the payoff lies in the distant future and the current behavior has immediate rewards.

Over the past 20 years, the NHLBI has supported multidisciplinary studies to examine what impact interventions have on the social and environmental factors that have a positive influence on health behaviors or policies. On September 25-26, 1996, more than 100 scientists representing various disciplines gathered on the NIH campus to participate in an NHLBI-sponsored conference, "Community Trials for Cardiopulmonary Health: Directions for Public Health Practice, Policy, and Research." The conference focused on what has been learned from two decades of intervention research involving intact groups, as are found in schools, worksites, medical practices, religious organizations, and entire communities.

An understanding of the target population is essential to the effectiveness of an intervention program. This includes knowledge of how the population has been informed or misinformed about a particular disease. It also includes knowing whether people are aware of the risks and how they can minimize or increase their risk by lifestyle choices.

Gleaning insight from completed studies, researchers at the conference advised that future interventions

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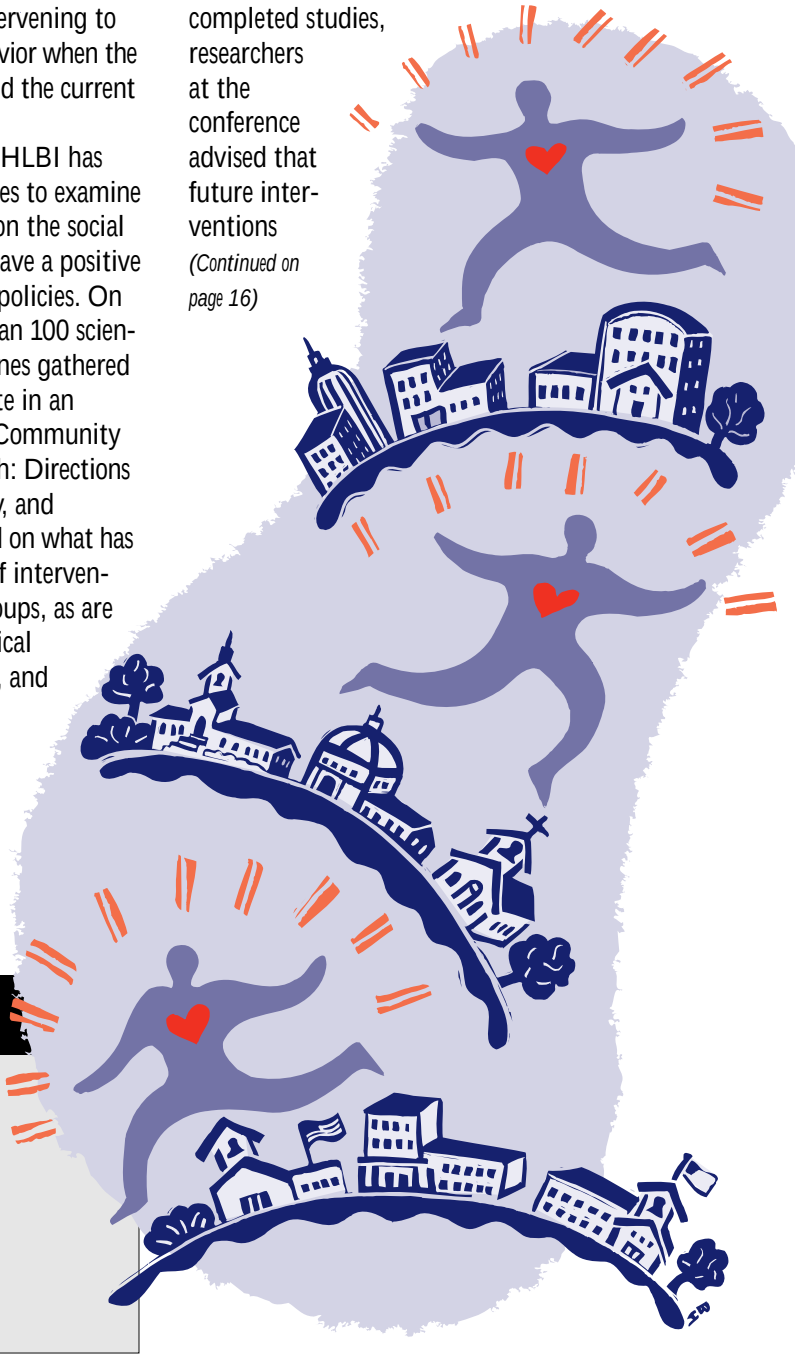

Featured Articles

NATIONAL INSTITUTES OF HEALTH

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

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Where Have We Been and What Have We Done?

THE MANAGING EDITOR EXPLAINS THE *HEARTMEMO* REDESIGN

You do not need me to tell you that *HeartMemo* has changed; the evidence is in your hands. However, a little background about why and a little hint about what may be helpful.

The revitalization of *HeartMemo* began in 1995 with a customer satisfaction survey. More than 1,000 *HeartMemo* readers responded, telling us what they did and did not like about the newsletter. Based on those responses and some smoldering ideas, the editorial board decided to implement some needed changes.

Because *HeartMemo* received high marks on "overall satisfaction," we were careful not to fix what was not broken. Most readers said they find *HeartMemo* useful and filled with new and reliable information. Much to our pleasure, over half of the respondents like *HeartMemo* so much that they pass it on to an average of nine other people and would like to see it published more often.

HeartMemo *has a "visual voice" you will recognize with each issue.*

Highly rated sections such as those dealing with cholesterol, research updates, high blood pressure, and heart attack remain in this new version. Respondents requested more information on community programs (this issue's main feature), timely conference schedules (page 21), lists of materials available from other sources (page 23), updates about minority populations (page 13), funding sources (page 26), and reproducible information (page 25).

When responding to open-ended questions about how to improve *HeartMemo*, respondents overwhelmingly mentioned the format and presentation. Some wanted more information summaries and less detail, and others wanted more indepth articles. The consensus was to make *HeartMemo* more readable—"simple and to the point." Respondents used a variety of expressions to request more and better graphics and to suggest ways to highlight *HeartMemo* contents.

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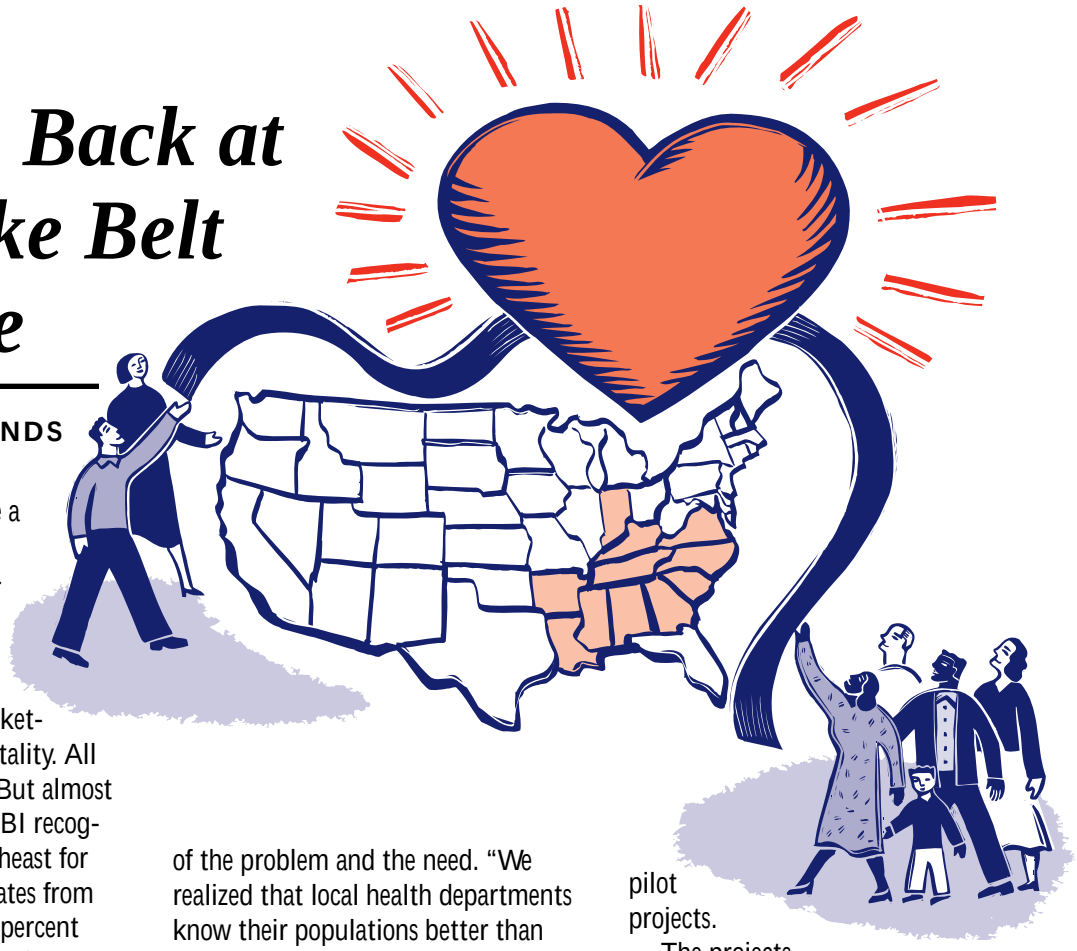
Looking Back at the Stroke Belt Initiative



The Tie That Binds the South

Getting recognition can be a tricky business. Take what happened in the southeastern United States. That part of the country is recognized for having high humidity, great college basketball, and uncommon hospitality. All acceptable characteristics. But almost two decades ago, the NHLBI recognized 11 States in the Southeast for having the highest death rates from stroke in the country—10 percent higher than average. Forget the humidity. Forget the basketball. Forget the hospitality. These States—Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia—became known as the Stroke Belt.

Eleven States in the Southeast have the highest death rates from stroke in the country.

The NHLBI responded to the recognition by creating a special initiative to lower the risk of stroke in these States through community-based education and prevention programs. "The initiative was unique in many ways," according to Mr. Glen Bennett, NHLBI project officer for the Stroke Belt Initiative.

Notably, the NHLBI's first step was to convene representatives from each State to hear their assessments of the problem and the need. "We realized that local health departments know their populations better than anyone else, and so we wanted to help them put their ideas to work," explained Bennett.

The NHLBI funding allowed States to implement activities in four categories: (1) problem assessment, (2) evaluation and data analysis, (3) educational interventions, and (4) community organization techniques. Most States selected one category, but some responded to multiple categories. Pilot projects for many States paralleled what they had described during the initial meeting.

The NHLBI provided phase I funding for 1-year pilot projects that demonstrated the States' capacity to design and implement projects aimed at reducing risk factors for stroke in their communities. The funding was directed to State health departments because they are ultimately responsible for addressing health concerns within the States. Phase II funding allowed States to deliver effective health education interventions, using the methods and materials from the pilot projects.

The projects, which lasted 2 to 3 years, were in one of four general education/intervention categories: (1) interventions in health department clinics and outreach services, (2) church-based risk factor intervention programs, (3) community education and intervention programs, or (4) public education campaigns using the mass media.

In spite of these and other best efforts, stroke or cerebrovascular disease remains the third leading cause of death in the United States. More than half a million Americans have a stroke each year—150,000 die as a result. High blood pressure is an established risk factor for stroke, and recently cigarette smoking and obesity have been identified as significant risk factors.

Principal investigators and key staff members for Stroke Belt Initiative projects convened May 9 and 10, 1996, at Morgan State University in Baltimore to review their accomplishments and reflect on lessons learned.

Detailed information on Stroke Belt Initiative projects is available on the NHLBI World Wide Web site. A self-study quiz that allows certified health education specialists to apply for continuing education credits is included.

Highlights of State Projects

Alabama used Stroke Belt Initiative funding to improve and expand existing detection, treatment, and follow-up interventions in health department clinics. The State was able to improve the quality of care and increase the number of people receiving care by using quality assurance (QA) audits and a patient recruitment program for county health department clinics with low patient loads. The State established clinical standards as well as administrative/environmental standards. QA teams visited clinics to review patient charts for compliance. A paid patient recruiter worked with clinics to increase clinic usage. Health departments offered blood pressure monitoring, free or low-cost medication, and patient counseling for Alabama's medically indigent population.

Arkansas formed planning groups or coalitions in the State's 10 counties with the highest stroke mortality. The coalitions were organized and convened by a project coordinator who was hired by the health department and who planned and implemented activities. Health fairs were the predominant sponsored activity, supplemented by church- or school-based programs such as nutrition workshops or hypertension screenings.

Georgia conducted a mass media campaign to encourage people with hypertension to remain on treatment. The centerpiece of the campaign, Strike Out Stroke (SOS), spotlighted activities during selected Atlanta Braves games. SOS also broadcast public service announcements and received live media coverage, including features on African American gospel

and talk radio programs. The print component targeted small, local newspapers by issuing feature articles, health reports, human interest stories, and letters to the editor. Georgia installed automated equipment in State office buildings to measure blood pressure, pulse rate, and weight. Partnered with the Georgia Stroke Belt Consortium, the project developed easy-to-read materials; conducted screenings at churches, community centers, and State office buildings; and sponsored SOS contests in churches.

Indiana expanded its focus after the pilot to include smoking cessation in addition to hypertension control. The project targeted low-income populations at two health centers in Indianapolis and their adjacent housing projects. The smoking cessation component included community awareness and education. Smoking cessation participants also received nicotine replacement patches and behavior modification counseling. A health educator offered individual counseling and conducted onsite presentations and risk factor screenings. Health educators helped patients with high blood pressure set goals for lifestyle changes. The project also developed an electronic database for patient tracking and evaluation.

Kentucky developed a program for public health nurses on their function as educators and role models, as well as obesity, smoking cessation, and hypertension. The project also conducted smoking cessation classes to reduce the number of nursing staff members who smoke. Nurses were taught to give effective advice to patients on smoking cessation. They also led smoking cessation classes and support groups at health departments. Low-income smokers who attended support groups received free nicotine patches and followup counseling.

Louisiana focused on establishing hypertension prevention and control programs in African American churches. Some churches also conducted weight loss and smoking cessation sessions. The project established programs in 26 churches in the New Orleans area during phase I. Phase II was a 2-year effort to involve churches in other areas of the State. Consultants were hired from the targeted communities to recruit churches and help them organize and establish the programs. The project provided a 4-hour training workshop for the health care ministry teams established in each participating church to plan and conduct the activities and a blood pressure measurement course for students. Several churches identified their best cooks, and a project nutritionist worked with them to make their favorite recipes heart healthy. The dishes were tested at church-sponsored food events and then published in a cookbook, *Soul Food Cooking the Heart-Healthy Way.*

Mississippi conducted a stroke education and intervention program targeted for high-risk populations in medically underserved counties with an extremely high—41 percent—rate of poverty among African Americans. The project installed automated equipment in the courthouse and public health clinic of each participating county to give free blood pressure readings. The machines displayed a message instructing persons with elevated results to see a doctor and displayed a toll-free telephone number for those without access to care. A project nurse answered the calls and helped patients find care, medication, nutrition counseling, and

Lessons Learned

Working With Churches

- Patience and time are required to organize and implement health programs in churches.
- No best way exists to recruit churches and sustain their participation.
- Support from the clergy is essential.
- The creativity of church teams to reach their congregations should be encouraged.
- The coordinator of a church health care ministry or team is critical to the motivation of the team members.

Working in the Community

- Quality control audits can improve the level of care for patients with hypertension in health department clinics.
- Patient recruitment and outreach can increase the use of local clinics.
- Development of coalitions takes time.
- Programs that can be integrated into the health center's basic services and that gain the support of administrators and clinicians are likely to be sustained.
- Automated equipment can contribute to hypertension detection and control efforts.

social services as needed. To augment the automated screenings, trained teams offered hypertension screenings at churches, community centers, civic organizations, health fairs, schools, banks and other businesses, and other community gatherings. The project staff wrote *The Angry Heart,* a one-act play for elementary school children that promoted healthy lifestyles.

North Carolina combined a mass media campaign with community outreach and professional education to address high blood pressure in African Americans. Media representatives and local community leaders developed culturally appropriate educational messages. Staff members, health care professionals, and other volunteers were trained to give interviews on hypertension to local television and radio programs and newspapers. Community outreach activities included the dissemination of easy-to-read educational materials, poster and letter-writing contests in churches, hypertension screenings at fast-food restaurants and convenience stores, and risk factor reduction classes in community centers. The project also compiled the educational materials developed by the project into a resource guide to distribute to health agencies across the State.

South Carolina focused on African Americans because they have more than twice the stroke mortality rates of whites—65.4 percent versus 31.8 percent per 100,000 population. The goal of the project was to improve hypertension awareness, treatment, and control while increasing the number of community-based programs. The project used three channels in the community: churches, the media, and beauty shops and barbershops. This capacity-building project developed training manuals to help health professionals and volunteers develop stroke prevention initiatives within each of these channels.

Tennessee targeted African Americans in three metropolitan counties where nearly 70 percent of all African Americans in the State reside. The project's goal was to enable each county to organize and develop stroke education and prevention activities. One of the three counties formed a coalition that provided leadership and community involvement to the project. The coalition also formed a Youth Mentor Program to carry out smoking education, prevention, and cessation activities for adults and youths. The State focused primarily on recruiting African American churches to develop and carry out programs for their congregations on smoking cessation, nutrition education, and weight management. Many church teams used creative ways to communicate health messages to their congregations, such as children's letter-writing campaigns, food-tasting events, plays, and a youth mentor program.

Virginia formed a unique collaboration between the Virginia Department of Health (VDH) and the Baptist General Convention of Virginia (BGC), an association of more than 1,000 independent African American churches in the State whose members total more than 200,000. The VDH and the BGC focused on three risk factors—high blood pressure, smoking, and obesity. The director of the BGC health care ministry worked with volunteer coordinators to recruit churches, train volunteers, and support church activities. The project developed training manuals for the hypertension component, including one for training trainers, and an educational piece for the congregation, *Stroke Busters.* The smoking cessation and obesity components used existing materials, cleverly redesigned around appropriate themes, such as "Thank God I'm Free (TGIF)" and "Taking Responsibility in Meal Management (TRIMM)."

For more information on the Stroke Belt Initiative, contact the NHLBI Information Center, P.O. Box 30105, Bethesda, MD; 20824; telephone (301) 251-1222. ■

The National High Blood Pressure Education Program

Combating Congestive Heart Failure

The NHLBI and the NHBPEP have launched a number of efforts to alert professionals and the public about the link between uncontrolled high blood pressure and congestive heart failure (CHF). Creating a strong community focus on this connection can improve hypertension control among older people and ultimately reduce the number of people who lose their life or quality of life to CHF.

High blood pressure—a significant problem among older Americans—is the most common cause of CHF. Simply controlling high blood pressure could reduce the incidence of CHF by as much as 55 percent, based on data from clinical trials conducted in this country and abroad.

In March 1996, the NHBPEP issued a "National Call to Action" to mobilize the resources and skills of its 45 member organizations to bring national attention to uncontrolled high blood pressure and CHF. This Call to Action urged members of the NHBPEP Coordinating Committee to work within their organizations to develop measurable activities that have a direct impact on patients.

This appeal on behalf of older Americans met with an enthusiastic response. More than 80 percent of the NHBPEP members signed and returned a pledge signifying their commitment to the effort. In the year since the Call to Action was issued, members have written journal and newsletter articles, made conference presentations, developed continuing medical education courses, provided television and radio interviews, and disseminated documents on the Internet that focus on high blood pressure and CHF.

Concurrently, the NHBPEP has been developing a network of agencies that target older Americans through community outreach efforts. This network currently reaches more than 4 million older Americans. Network member organizations include the American Association of Retired Persons, the National Black Women's Health Project, the National Council on Aging, the National Council of Negro Women, and the Older Women's League. Working with member organizations, the NHBPEP is developing activities that focus on reducing CHF through better control of hypertension.

Other efforts include a mass media campaign focusing on the new Healthy People 2000 goal of reducing high blood pressure in older women. This campaign has three components: (1) a communication campaign that targets older Americans, (2) an outreach campaign that involves NHBPEP Coordinating Committee members, and (3) a public and professional awareness campaign that is a collaborative effort of the NHLBI and the Alliance for Aging Research.

The Communication Campaign

This component of the campaign is developing public service announcements on hypertension control that target older women. It has conducted six focus groups of older women with high blood pressure to determine the best messages for this group. An important discovery was that many of the women initially indicated that they follow their treatment plan; however, closer questioning revealed sporadic adherence at best.

CHF Facts and Figures

CHF is a growing public health concern, affecting about 5 million Americans—nearly 400,000 new cases are diagnosed each year. Deaths from stroke and heart attack have declined significantly in recent years, but deaths due to CHF are steadily increasing. CHF is now the most expensive disease in the U.S. medicare system—primarily due to multiple hospitalizations for individual patients. In 1993, an estimated $12 billion was spent on the care of CHF patients.

More than half of all Americans ages 60 to 74 have high blood pressure (140/90 mmHg or greater) —the most common cause of CHF. Fewer than 20 percent control their high blood pressure, according to the National Health and Nutrition Examination Survey (NHANES). Among African Americans, the prevalence rates are even more alarming. Almost 74 percent of African American women and about 71 percent of African American men ages 60 to 74 have high blood pressure.

HEART FAILURE 101

Heart failure does not mean that the heart stops. It means that the heart is failing to pump blood as it should and, therefore, is also failing to deliver enough oxygen to the body's cells. This inability to pump blood effectively is caused by damage to the heart muscle. The damage can result from a heart attack, uncontrolled high blood pressure, atherosclerosis (arteries that are blocked or partially blocked by cholesterol deposits), valve deformities, or lung disease.

When the heart is not pumping properly, blood backs up in the lungs (which makes breathing difficult) or gathers in the veins that lead back to the heart (which causes severe swelling). This results in a number of symptoms, which may include:

- **Fatigue and weakness;**
- **Shortness of breath;**
- **A dry, hacking cough or wheezing;**
- **Swelling, especially in the legs and ankles;**
- **Rapid weight gain from fluid retention;**
- **Abdominal tenderness and bloating; and**
- **Inability to sleep in a prone position.**

Unfortunately, the prognosis for patients with CHF is not favorable. As symptoms become more pronounced, patients tend to lose their mobility and their quality of life steadily declines. Most patients are hospitalized several times, and only half survive more than 5 years following a definitive diagnosis of CHF. Eventually, oxygen deprivation or pressure from the swelling damages vital organs, including the heart. A common consequence of CHF is sudden cardiac death, which occurs five times more often among these patients than in the general population.

Although the NHLBI is conducting research studies to develop better medications, devices, and surgical techniques to treat CHF, prevention—particularly through hypertension control—is still the best weapon against this devastating disease.

The Outreach Campaign

NHBPEP Coordinating Committee members are distributing information about the need to increase high blood pressure awareness among older women. The NHLBI is contacting radio, television, and print media in the communities of coordinating committee members to set up press interviews. Members received mass media training to prepare for these interviews and future contacts with the press. Coordinating committee members will also serve as speakers at local conferences, workshops, and other pertinent health promotion events.

Collaborating With the Alliance for Aging Research

The Alliance for Aging Research and the NHLBI formed a partnership to launch a new public and professional campaign, "You Have What It Takes To Control High Blood Pressure," to improve the prevention and control of high blood pressure. The program complements the ongoing NHBPEP mass media campaign, begins the celebration of the 25th anniversary of the NHBPEP, and responds to the National Call to Action to focus attention on the increasing incidence of CHF due to uncontrolled high blood pressure.

Recognizing the need for a concerted effort to treat hypertension effectively, educational materials have been developed for the campaign. Hoechst Marion Roussel, Inc., a pharmaceutical research company, has provided an unrestricted grant to support a part of the campaign that focuses on aggressive prevention and treatment of hypertension in older Americans, especially women.

Controlling High Blood Pressure: A Woman's Guide, a consumer brochure, presents the message that hypertension is a serious health problem, which women and their doctors have the power to prevent and control. Copies of the brochure are available from the NHLBI Information Center (see page 26 for more information) and from the Alliance for Aging Research, 2021 K Street, NW, Washington, DC 20006.

As a part of the campaign, a clinical guide is being developed for primary care physicians and other health professionals. It will be mailed to 240,000 health care providers and is free through the Alliance. The guide stresses the importance and safety of lowering high blood pressure in older people to target levels and discusses treatment options. It also offers practical ways to deal with obstacles such as changing lifestyles and patient adherence to medication regimens.

In addition, the campaign is developing a World Wide Web site on high blood pressure and older people that

will be launched during the summer of 1997. This site will include the consumer brochure, tips on nutrition and lifestyle changes, and hyperlinks to the NHLBI home page, the American Heart Association, and other relevant organizations.

The NHBPEP invites *HeartMemo* readers to join its efforts to spread the word about the link between high blood pressure and CHF. "Pooling our ideas and resources," emphasizes NHBLI director Dr. Claude Lenfant, "makes it far more likely that we can effect a substantial change in the impact of congestive heart failure among our rapidly expanding older population."

Organizations that are interested in receiving more information should write to the NHLBI Information Center, P.O. Box 30105, Bethesda, MD 20824-0105. ■

NHBPEP To Celebrate 25 Years Of Progress And Challenges

Almost 1 million Americans were dying each year from stroke and heart disease when the NHBPEP was mandated by an act of Congress in 1972. Dr. Elliott Richardson, Secretary of the Department of Health, Education, and Welfare at the time, called on the NHLBI to develop strategies to address this national tragedy. The strategies focused on aggressive research agendas and an education program to translate and provide research findings to those in the medical community most able to make progress against diseases of the heart. At the same time, the 1public became the focus of an equally aggressive national campaign to increase awareness and treatment of high blood pressure.

During the first decade of the NHBPEP, the first national treatment guidelines, which were based on the most current clinical trial data, were developed by the Joint National Committee on the Detection, Evaluation, and Treatment of High Blood Pressure and released. Concurrently, the NHBPEP began developing a broad compendium of community-based activities designed to raise public awareness of high blood pressure that included the screening of millions of Americans in communities, worksites, and health clinics. Clinical trials and observational studies began in concert with the public information campaign.

By the end of the second decade of the NHBPEP in 1992, mortality and morbidity rates had decreased by 50 to 60 percent.

By the mid-1980s, progress was apparent as mortality rates for stroke and coronary heart disease began to decline, dropping more than 30 percent by 1985. National surveys showed a corresponding increase in the number of persons aware of the consequences of high blood pressure, those able to define high blood pressure, and those treated for high blood pressure. Adding to the focus on prevention and treatment, State departments of health established their own cardiovascular disease education programs and initiatives.

Data from national observation studies and clinical trial results began to reveal segments of the populations at increased risk for cardiovascular diseases. This information was used by the NHBPEP in developing strategies to target special populations and regions of the United States where progress against high blood pressure had been slow. The creation of the Stroke Belt Initiative targeted Americans in the Southeast who had mortality rates above those of the population at large. Working group reports focused attention on groups for whom treatment benefits could further decrease deaths and morbidity from stroke and coronary heart disease such as older Americans, people with diabetes and chronic renal diseases, children, and adolescents. Clinical trials and community studies concluded that a population-wide primary prevention strategy would benefit a large group of individuals likely to develop high blood pressure as the population ages. By the end of the second decade of the NHBPEP in 1992, mortality and morbidity rates had decreased by 50 to 60 percent.

However, data pointed to the challenges for the next decade. The pace of improvement in mortality rates was slowing, and although more patients were controlling their blood pressure to less than 140/90 mmHg, more than 30 million people with hypertension were unable to meet this goal. In addition, changes in the health care system needed to be considered in developing strategies for public health that were consistent with the goal of increasing awareness, treatment, and control of high blood pressure. The nineties have seen the development of strategies to address these concerns.

The NHBPEP celebrates 25 years of progress and challenges in 1997 with the science base it created over the past quarter-decade clearly translated into programs that improve the health of the public. Almost everyone knows the consequences of high blood pressure and has his or her blood pressure measured each year. Proven prevention strategies and

treatment options exist for those with high blood pressure, and research is under way to address many of the remaining unanswered questions. However, too many people with high blood pressure are not controlling it to below 140/90 mmHg; too many Americans are without access to care; and in spite of the millions of people prevented from having strokes and heart attacks in the last quarter-century, more than 400,000 Americans die each year from these diseases. The challenges for the next millennium are clear.

Help the NHBPEP celebrate 25 years of progress and challenges by recommitting to the fight against heart disease and stroke. Planning community prevention, awareness, and educational activities throughout 1997 can make a difference in your area. The NHBPEP is looking forward to meeting the challenges of the future and depends on the thousands of community health organizations, clinicians, and public health educators to create the environment for continued progress and to meet these challenges. This is a partnership that has touched and will continue to touch all Americans. ■

DON'T FORGET TO RESUBSCRIBE. SEE PAGE 27.

The National Cholesterol Education Program

NCEP Involved in a PBS Special

"Cholesterol: The Killer Within," a groundbreaking hourlong public television special developed in conjunction with the NCEP, won a "Freddie" award at the 1996 International Health and Medical Film competition. The program, which was produced by Medical Communication Resources, Inc., began airing last September—first in Los Angeles on KCET, then across the country.

Program host Mike Farrell of "M*A*S*H" invites viewers to join him as he unravels the mysteries of cholesterol and explains new scientific developments that have made the treatment of high blood cholesterol a high priority.

"Cholesterol: The Killer Within" offers the "latest information that we have about the benefits of lowering cholesterol with diet, exercise, and medication," says NCEP coordinator Dr. James I. Cleeman. "It presents the positive message that heart disease can be controlled and prevented, in clear, take-action terms."

Unlike many other medical programs, "Cholesterol: The Killer Within" is an intriguing detective story, tracking the trail of this silent killer. The investigative report profiles likely victims and systematically reveals the primary culprit: high cholesterol. Real-life survivors from around the world reveal personal stories about their successful battles with cholesterol and heart disease. Viewers are motivated to take control of their own cholesterol.

State-of-the-art graphics give viewers an inside look at human arteries and how cholesterol attacks—forming plaque that causes arteries to become narrow, hardened, and less able to carry blood throughout the body.

Although the program deals with a very serious subject, it provides the positive message that lowering cholesterol contributes to a longer, healthier life. Viewers learn the importance of knowing their cholesterol levels and are given strategies for controlling high cholesterol and heart disease.

During the broadcasts, patient advocacy and medical groups around the country hosted viewing events in their communities to encourage viewers to take action against cholesterol. Viewers were told how to get free information developed by the NCEP on managing high cholesterol and heart disease, including a new patient education booklet, *Live Healthier, Live Longer—Lowering Cholesterol for the Person With Heart Disease* (NIH Publication No. 96-3805). This booklet is available from the NHLBI Information Center.

The special program will likely run again in 1997, particularly during National Cholesterol Education Month, and the video is available to community groups for educational programs.

Scientists spent nearly five decades uncovering the mysterious link between cholesterol and heart disease. Today, physicians know that elevated cholesterol can drastically shorten lives—contributing to more than 500,000 deaths from heart disease each year, showing no gender discrimination.

"Cholesterol: The Killer Within" aims to show the dangers of high cholesterol and, more importantly, to show viewers how effective prevention and management can be.

Recent studies have proven that lowering cholesterol with diet, exercise, and medication can prevent heart attacks and even save lives in people at high risk for heart disease. Experts say that nearly all of the estimated 13 million Americans with heart disease would benefit from treatment for high cholesterol. Yet only 30 percent are on a cholesterol-lowering diet, and only 25 percent are receiving cholesterol-lowering medicine.

Millions of Americans who do not have heart disease and who should also be taking measures to lower their cholesterol to potentially prevent heart attacks are not doing so. ■

NHANES III Shows Cholesterol Levels Taking a Plunge

Data from the third National Health and Nutrition Examination Survey (NHANES III), conducted by the National Center for Health Statistics of the Centers for Disease Control and Prevention (CDC) from 1988 to 1994, show that average cholesterol levels have dropped from 213 mg/dL in 1976-80 to 203 mg/dL in 1988-94.

Comparison of data collected in the four national health surveys conducted between 1960 and 1994 shows a significant decline in mean serum total cholesterol levels in adult men and women over the past 30 years. More than half the decrease in cholesterol levels has occurred since 1978, and levels continue to decrease. The average cholesterol value for men is now at 200 mg/dL. In addition, there has been a corresponding decline in the proportion of adults with high blood cholesterol levels (240 mg/dL or greater). In fact, one goal for the year 2000—to reduce the prevalence of high blood cholesterol to no more than 20 percent in adults—essentially has been achieved.

The population and high-risk educational messages from the NCEP have undoubtedly played a significant role in this healthful trend. Cholesterol Awareness Surveys conducted by the NHLBI from 1983 to 1995 have shown that the cholesterol-related knowledge, attitudes, and practices of professionals and the public have improved markedly. Important changes have also taken place in the dietary habits of the U.S. population, especially changes in the intakes of saturated fat, total fat, and dietary cholesterol as seen in the NHANES results. Consumption of saturated fat has declined from 13 percent of total calories to 11 percent, and there has also been a decrease in total fat and cholesterol intake, accompanied by an increase in polyunsaturated fat intake.

Full data sets from the NHANES III will be available on CD-ROM. Plans are already under way for the NHANES IV to begin in late 1998. ■

The National Heart Attack Alert Program

NHAAP Technologies Working Group Report Published

An NHAAP working group report on diagnostic technologies used in emergency departments to identify patients with acute cardiac ischemia (ACI), including acute myocardial infarction (AMI) and unstable angina pectoris, appears in the January 1997 issue of *Annals of Emergency Medicine.* The report reviews the extent to which research-based data exist to support the effectiveness of a variety of technologies in the emergency department.

Clinical recommendations are an essential part of this comprehensive review, which was written by the NHAAP Working Group on Evaluation of Technologies for Identifying Acute Cardiac Ischemia in the Emergency Department.

The ideal time for administration of therapy is within 1 hour of the onset of the patient's symptoms.

The report, "An Evaluation of Technologies for Identifying Acute Cardiac Ischemia in the Emergency Department," is important to the NHAAP's identification of barriers to the rapid identification of ACI in the hospital setting.

Large randomized studies have demonstrated the advantage of early administration of thrombolytic therapy, or "clot-busting" drugs. Early administration of clot-busting drugs halts the progression of a heart attack that is in progress. For best results, the ideal time for administration of therapy is within 1 hour of the onset of the patient's symptoms.

The report concludes that research is greatly lacking on the diagnostic performance and clinical impact of technologies used for the emergency

evaluation of the most common cause of death in our country. Further diagnostic trials that address the accuracy and impact of these technologies are critical to the NHAAP's mission to improve the speed and effectiveness of care for emergency cardiac patients.

Roughly 5 million Americans go to emergency departments with chest pain each year; those who are unnecessarily admitted cost almost $3 billion a year, but approximately 20,000 patients are inappropriately sent home. ■

NHAAP 5-Year Anniversary

Marking the fifth anniversary of the NHAAP Coordinating Committee, members and advisors gathered for a retreat at the Turf Valley Resort in Ellicott City, Maryland, last June to review the progress of the first 5 years and to examine the direction of the program.

Program accomplishments were noted by committee members as considerable, particularly with regard to decreasing the time to treatment for patients with AMI in hospital emergency departments. Yet, the committee acknowledged that more work remains to be done to reduce morbidity and mortality from AMI, notably in terms of educating the public.

The coordinating committee recommended that the NHAAP focus on several areas over the next 5 years, including the following:

- Evidence-based evaluation of diagnostic technologies and strategies (including non-ST segment AMI);
- Education that targets health care professionals, high-risk patients, non-AMI chest pain patients, and patients/bystanders);
- New information technologies; and
- Health care system planning (to encompass the community and managed care entities).

Highlights of the Past 5 Years

- Professional education was the NHAAP's priority during the program's first 5 years.
- The NHAAP developed five reports that were published in professional journals and as Government Printing Office documents.
- Approximately 10 journal articles have been published based on these reports, as well as more than 20 newsletter articles and numerous other references in textbooks and other educational publications.
- More than 75,000 copies of these reports have been mailed to health care professionals.
- Coordinating committee members have made more than 25 presentations at conferences and seminars concerning the NHAAP and its recommendations.
- Data from the National Registry of Myocardial Infarction also show that the median time from when a person enters the emergency department to the time of treatment with thrombolytic therapy was reduced by one-third (from 60 minutes to 39 minutes) between the first half of 1992 and the last half of 1995.
- In cooperation with the NHAAP, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) added a "time to thrombolytic therapy" variable to the cardiovascular-related data that are collected. These data are part of a measurement system that will assist emergency departments in identifying and correcting problems of treatment delay.
- The number of early defibrillation programs for emergency medical technicians (EMTs) increased from 1,409 programs in 1990 to 5,716 programs in 1995; beginning in 1995, defibrillation was included as a basic skill in the EMT curriculum.
- The percentage of the population covered by 9-1-1 increased from 75 percent in 1993 to 86 percent in 1996.
- The NHAAP encouraged and fostered the development of the Rapid Early Access for Coronary Treatment (REACT) research program. This NHLBI study will investigate the impact of a broad-scale public education and community intervention campaign on early access to care and treatment of patients with symptoms and signs of a heart attack. The intervention phase of the study is currently in progress.

During the retreat, NHAAP Coordinating Committee members also considered their own organizational structure and procedures and examined the roles and relationships that their organizations have with the program. For its part, the NHAAP believes that a cohesive partnership with member organizations is vital to its mission as it disseminates information and educates health care professionals regarding early intervention and treatment of patients experiencing a heart attack or symptoms of acute cardiac ischemia.

A special presentation was made in conjunction with the distribution of a "Progress Review at 5 Years." This report chronicles the activities and milestones of the NHAAP and the efforts of the coordinating committee organizations (see box above). Private industry and Government liaison agencies, as well as the coordinating committee member organizations, were recognized for their support in spreading the NHAAP's message. ■

The NHLBI Obesity Education Initiative

Expert Panel Works With Cochrane Collaboration

In 1995 the Expert Panel on the Identification, Evaluation, and Treatment of Obesity in Adults was established to develop clinical guidelines on obesity. It was the first panel convened under new NHLBI directives that expert panels consider an evidence-based approach to the development of guidelines. The panel has followed this approach, which required methodological components including development of an evidence model that illustrates the various evidence topics, which are then reviewed by the panel; extensive MEDLINE literature reviews, which were conducted with the assistance of the National Library of Medicine and the National Center for Health Services Research; development of materials to abstract pertinent literature; development of databases to accommodate the literature searches and data abstraction; and development of evidence tables and criteria to judge the evidence.

The MEDLINE search provided over 41,000 titles pertinent to the topic, of which 374 were randomized controlled trials meeting the panel's criteria for review.

Assisting the panel in the development of the evidence-based approach is Dr. David Schriger, UCLA School of Medicine, and Dr. Elaine Chiquette, San Antonio Center of the Cochrane Collaboration. The Cochrane Collaboration is a 3-year-old international organization whose mission is to prepare, maintain, and disseminate systematic reviews and meta-analyses of health care interventions. The collaboration accomplishes its goals by organizing review groups around a disease entity; the groups are composed of experts from around the world.

There are 12 Cochrane Centers around the world that help facilitate the establishment of review groups and train people to do systematic reviews. The San Antonio Center provides advice on multiple aspects of systematic reviews, including searching and selecting materials, abstracting material, critiquing material methodologically, organizing material into summary evidence tables, and performing meta-analyses.

The panel meets again in June 1997 and expects to complete its work by February 1998. A summary of activities will appear in a future *HeartMemo*. ■

CHPP Partners With NRPA

As part of its effort to encourage heart-healthy behaviors among children and their families, the Cardiovascular Heath Promotion Project (CHPP) has formed a strategic alliance with the National Recreation and Park Association (NRPA). The CHPP is a major NHLBI initiative to protect the cardiovascular health of American children. The NRPA is an association of 50 State affiliates and 23,000 professionals throughout the United States. This alliance builds on the strengths each brings to the partnership. One of the major missions of the NRPA is to be an advocate for health and wellness in local communities and to develop alliances with health organizations. The relationship between the CHPP and the NHLBI helps achieve that mission. For its part, the CHPP can draw on the knowledge and resources of NHLBI-funded research but does not have a presence in local communities. The alliance allows both the CHPP and the NRPA to extend their influence into areas that neither could reach alone. A TV PSA campaign and an outreach to elementary school teachers illustrate the potency of the strategic alliance.

The TV PSAs, which encourage young people and their families to become and stay physically active, feature Jonathan Taylor Thomas, the popular young star of television's "Home Improvement." Taylor, highly regarded by the target audience—America's young people—volunteered his time to create the PSAs in which he talks to children about the importance of physical activity.

A unique aspect of the campaign is that these PSAs are more than just a message: They are a blueprint for community involvement. One of the 30-second PSAs has a 10-second blank "trailer" at the end. Public service directors at TV stations across the country are being encouraged to use the PSA to sponsor special physical activity events for children and their families in conjunction with the local recreation and parks organization. The TV stations can offer the 10-second trailer to service and retail companies or community organizations that will support the special event. Stations can be the catalyst to get children, their families, and even entire communities involved in physical activity.

"Jump Start" is another aspect of the CHPP alliance with the NRPA. The NHLBI and the NRPA have joined with *Scholastic* magazine for a

project that gives elementary school teachers heart-healthy information, particularly to encourage physical activity. Materials from NHLBI-funded programs such as CATCH and SPARK (see below) give teachers a variety of ways to include physical activity components into their language arts, social studies, and science classes. A mailing to introduce the program is being sent out to teachers this spring, and in the fall, a teacher's guide will be provided to more than 30,000 grade school teachers throughout the country. Teachers will also receive ample supplies of "backpack stuffers"—information on developing lifelong heart-healthy behaviors—to give their students.

Another aspect of this alliance is the integration of NHLBI health information into an NRPA program called Active Living/Healthy Lifestyles, which encourages Americans to increase their level of physical activity. Over the next year, a series of program guides containing heart health information will be distributed to more than 4,500 managers in 800 NRPA agencies throughout the country. The managers will use these guides to create community programs, many of which will focus on health and physical activity.

In other program activity, the CHPP team is currently marketing two NHLBI-supported school-based projects, the Child and Adolescent Trial for Cardiovascular Health (CATCH)

and Project SPARK (Sports, Play, and Active Recreation for Kids) to teachers and school administrators.

Gleaned from more than 10 years of research, the NHLBI has repackaged and is selling (at cost) the materials used in the CATCH program. This multisite study demonstrated the effectiveness of school health education for motivating heart-healthy behavior. The materials include classroom curricula for the third, fourth, and fifth grades; take-home activities; a physical education curriculum; and a guide for food service supervisors to decrease the dietary fat and sodium in school cafeteria meals.

Project SPARK has materials available for teaching kids in kindergarten through sixth grade about the importance of an active lifestyle. SPARK physical education is inclusive, noncompetitive, non-gender-specific, active, and fun for both students and teachers.

CATCH and SPARK marketing fliers are being distributed nationwide to schools and State and district education supervisors. The Texas Diabetes Council/Texas Department of Health is taking the lead by partnering with the University of Texas CATCH site and other professional organizations to purchase 400 sets of CATCH materials for distribution to interested schools in Texas. The health department is underwriting the costs of the materials and providing them to interested schools in Texas.

Several associations are considering offering CATCH materials by including the materials in their catalogs and advertising them in their publications. These include the American School Health Association and the American School Food Service Association. The National Education Association is hoping to distribute the CATCH curriculum in two school districts and provide teacher training.

The Cardiovascular Health Promotion Project is succeeding in its mission to teach children an important lifestyle lesson before they become adults—heart-healthy behaviors can be fun and easy to learn. ■

Minority Populations

Salud para su Corazón Update

Heart disease is the leading cause of death for Hispanic Americans, as it is for all Americans. But for Hispanic Americans, it is a threat that is especially hard to fight.

The reasons for this are varied. Compared with other Americans, more Hispanics do not have access to routine health care, including preventive and primary care. More live below the poverty line, and more lack health insurance. Further, many Hispanics are cut off from most public health messages because they do not speak English.

As a consequence, Hispanics are largely unaware of how to protect their heart health by lifestyle modifications and monitoring risk factors such as high blood cholesterol and high blood pressure.

In 1994, the NHLBI launched a special initiative to improve the heart health of the Latino community in the metropolitan Washington, DC, area. Called Salud para su Corazón, the project is designed to raise awareness in the Latino community about the prevention of cardiovascular disease. The implementation phase of the project is almost complete. Many different strategies are being used to get the message out:

Radio

Dr. Elmer Huerta's radio program "Cuidando Su Salud" (Taking Care of Your Health) carried the "A Month of Prevention Against Heart Disease" series during September 1996 and March 1997. Listeners were given a telephone number to call to receive eight easy-to-read booklets and a

cookbook. Spanish-speaking operators responded to the calls. During the 4-week period following the airing of the series, 1,200 calls were received. To assist in project evaluation, a sample of the callers responded to a telephone survey.

Television

The television program "Línea Directa" (Direct Line), which is broadcast on the Spanish-language television network on channel 48, showed the video "Por Amor al Corazón" (For the Love of Your Heart) during October 1996 and February and March 1997. This video has been presented to community groups with a great deal of success.

Newspapers

Several local Spanish-language newspapers published selected recipes from the *Delicious Heart-Healthy Latino Recipes* cookbook.

Printed Materials

From September 1996 through March 1997, 9,000 sets of the eight easy-to-read bilingual booklets and 2,000 recipe books were distributed.

Health Fairs

The Salud para su Corazón project has been featured in several local health fairs where the project's materials have been distributed.

Charlas

Churches, clinics, and community-based organizations served as sites for 18 charlas (group discussions) about heart health from January through April 1997. Charlas include the video "Por Amor al Corazón," a question-and-answer period that is moderated by a health professional, a blood pressure screening, and distribution of Salud para su Corazón educational materials. To assist in project evaluation, 12 charlas were evaluated and a sample of the participants responded to a telephone survey.

The project has proved effective and popular and is expected to be repeated elsewhere to improve the heart health of other Latino communities across the United States. ■

The National Center on Sleep Disorders Research

Sleep and the Heart

Sleep disorders are now recognized as a serious public health problem, and mounting evidence suggests that sleep-disordered breathing may be related to an increased risk for cardiovascular diseases.

To assess this relationship, the NHLBI has funded—through its National Center on Sleep Disorders Research (NCSDR)—a 5-year multicenter study to determine the influence of sleep-disordered breathing on cardiovascular health.

The NCSDR brings a clear organizational focus to the Federal Government's longstanding effort to combat sleep disorders and works closely with private, public, and nonprofit groups. It was established within the NHLBI in 1993 by President Clinton, following the issuance of a report to Congress, *Wake Up America: A National Sleep Alert,* that identified sleep problems as a public health crisis. The Center is responsible for supporting research and training; disseminating research findings to health care professionals, patients, and the public; and coordinating sleep research for the NIH and the Federal Government.

One of the Center's first educational activities was to convene a working group of primary care physicians and experts on sleep apnea to create an educational program for primary care physicians. A mass media public

education program followed. Radio, television, and print public service announcements were developed, based on focus group research and other scientific evidence. These were sent to 6,000 radio stations as well as to all commercial and cable television stations in the country.

With the help of the American Sleep Disorders Association, materials were also distributed to all accredited sleep centers in the United States, with encouragement that they make them available to their local media.

The mass media campaign has had 2 successful years, and another wave of events is planned for 1997.

The Problem With Sleep

About 40 million Americans—men and women of every age, race, and socioeconomic class—experience an intermittent or chronic sleep-related problem, and most cases go undiagnosed and untreated. Although increasing numbers of people realize that sleep disorders contribute to daytime sleepiness, poor performance, impaired thinking, and automobile accidents, few people are aware that sleep-disordered breathing may affect the heart.

A number of adverse cardiovascular effects may be attributed to sleep apnea, which is characterized by chronic, loud snoring and interrupted breathing during sleep. In a given night, the number of breathing pauses may be as high as 20 to 30 or more per hour.

Each time this happens, the oxygen levels in the blood decrease, the heart pumps harder (raising blood pressure), and the muscles that control breathing struggle to restore airflow. People with sleep apnea gasp and jerk to breathe, but few awaken fully or remember the dozen or more episodes that may happen during the night.

The increased risk of cardiovascular events shortly after awakening has been linked to a rise in sympathetic nervous activity—the nervous system that controls the heart—associated with arousal, as occurs frequently throughout the night with sleep apnea.

Sleep Apnea and the Sleep Heart Health Study

To evaluate sleep apnea as a potential risk factor for cardiovascular disease, participants have been recruited since the summer of 1996 for an NHLBI-funded study, the Sleep Heart Health Study (SHHS).

In a given night, the number of breathing pauses may be as high as 20 to 30 or more per hour.

One obvious design for a study like this, which evaluates the effects of sleep apnea on cardiovascular disease, might be one where a group of patients who have not experienced cardiovascular disease are recruited and observed for a number of years. However, such a study would be expensive and delay access to urgently needed information. Consequently, the SHHS draws on populations in existing, well-defined cardiovascular studies and adds assessments of sleep activities to scheduled data collection.

The montage of assessments includes heart rate, chest wall and abdominal movement, nasal/oral airflow, blood oxygen levels, body position, muscle movement, and brain activity. In-home, overnight physiological monitoring during sleep is complemented by a questionnaire.

Six centers and a data coordinating center were selected to participate in the SHHS, including a component from the Framingham Heart Study in Massachusetts. Sites are located at University of Arizona, Boston University, University of California at Davis/University of Pittsburgh, Johns Hopkins University, University of Minnesota, New York University/Cornell University, and University of Washington/Case Western Reserve University. Each center has a field site, distinguished by a different geographic location or a different subject population. For instance, the Framingham study is a field site for Boston University. Subjects from the Strong Heart Study constitute field sites for Arizona.

The SHHS will provide new information on patterns of sleep and sleep apnea. Longitudinal analyses will determine to what degree sleep apnea contributes to cardiovascular disease and stroke. Data analysis is scheduled to begin in 1998, and information gathered will be the basis for public health policy, potentially allowing identification of high-risk populations.

Information on the National Center on Sleep Disorders Research can be obtained from the NHLBI Information Center. ■

DON'T FORGET TO RESUBSCRIBE. SEE PAGE 27.

Community-Based Interventions (continued from page 1)

should concentrate on vulnerable populations such as those who are not well educated or who have lower incomes.

They urged that intervention studies continue moving from disease prevention to health promotion because people are concerned more with the quality of life than with morbidity and mortality.

Large community trials, such as the Stanford Five-City Project, the Minnesota Heart Health Program, and the Pawtucket Heart Health Program, suggest that future interventions should be informed more by findings from population-based studies. Factors to consider include the following:

- Population differences—e.g., low rates of disease in some counties and high rates in others;
- Time trends—e.g., changes over generations as evidence of cultural influences;
- Migrants—e.g., age at which certain populations migrated and their social and cultural roles;
- Risk factors—e.g., differences among populations; and
- Complementary strategies—e.g., the need to have both population and high-risk strategies.

New Directions Based on Lessons Learned

School Settings

Schools are a valuable setting for interventions because they reach 95 percent of children and adolescents and provide a link to parents. Health topics can become a part of the curriculum and can benefit from built-in teacher/peer reinforcement. Schools are also natural settings to observe and influence important behaviors of children and adolescents because many of them eat one or two meals there and usually exercise during gym classes and recess.

Data from 15 school-based intervention studies showed positive effects from short-term interventions. Behavioral and cognitive outcomes showed more effect than physiological outcomes, and interventions with multiple components showed more effect than single-component programs.

School-based prevention programs can make substantial contributions to improving the health knowledge, behaviors, and risk factors of children and adolescents. These interventions can be enhanced by refining their content, improving their implementation, and incorporating them into the existing health and educational systems and policies of the school.

Worksites

Worksite-based interventions can offer excellent benefits to both employees and their companies. For example, they can have positive effects on employee recruitment, retention, and absenteeism. Employers and employees are mutual beneficiaries of health programs that increase employee morale and enhance productivity and performance. Worksite interventions encounter logistical problems, such as employee turnover and company mergers.

Previous studies provide cautious optimism about the effectiveness of worksite programs. To date, intense cardiovascular risk reduction counseling for high-risk employees has produced the best results. Low-intensity, short programs to increase awareness of cardiovascular risks in entire employee populations have not consistently achieved desired outcomes.

Managed care presents exciting potential for worksite programs.

Managed care, which is calling upon the health care industry to keep workers healthy to reduce health care costs, presents exciting potential for worksite programs.

Health Care Settings

How providers interact with their patients (practice behaviors) must be considered in health care interventions. The effectiveness of their actions and the factors that affect what they do, as well as patients' behaviors, must also be considered.

The education and training that providers give need to be combined with enabling strategies (e.g., office reminders), reinforcing strategies (e.g., feedback), and predisposing strategies (e.g., practice guidelines). Studies show that providers rarely implement all steps of an intervention program because of limited time or complex patient profiles.

Strategies for successful programs in health care settings include enlisting all office staff (physicians and other health professionals) to reinforce messages. Face-to-face counseling and multiple clinic visits help to reinforce and support changes in patients' behaviors.

Religious Organizations

Religious organizations are exceptional avenues for health care interventions because they have existing social support structures that are especially effective with hard-to-reach populations. These organizations can be helpful in recruiting and maintaining participants and serving as sites for intervention activities. Members can also be trained to deliver programs.

Religious organizations are potentially valuable channels with many advantages for public health partnerships. Programs with successful outcomes for practitioners, researchers, and clergy will encourage the patience, commitment, and sharing of resources that are required to identify more productive ways of working together.

Communities

Entire communities are an important focus for cardiovascular disease prevention interventions because behavior is shaped by the social and environmental factors in which people live. Results of community-based intervention studies have been mixed. Early studies showed that prevention interventions have population-wide effects on cardiovascular disease risk factors. Later studies—which were larger, longer, and more complex—showed positive effects for some but not all risk factors.

Time between discovery and dissemination must be decreased.

The overall experience indicates that community-based programs to reduce risks for cardiovascular disease can influence behavior on a broad scale. However, the optimal mix and sequence of components warrant more study. The characteristics of communities that are most favorably disposed to change should be examined. Programs need to be extended to different regions and populations, and the time between discovery and dissemination must be decreased.

Community-based interventions are crucial for reducing the risk of cardiovascular disease. Modifications recommended by conference researchers to improve community-based designs will provide direction for studies and programs in community-based settings.

A full conference report will be available August 1997 in a supplemental issue of *Annals of Epidemiology.* ■

HeartMemo *Redesign*
(continued from page 2)

Graphic Guides

Making *HeartMemo* more readable will not take away from its scientific integrity. It will be a more hands-on, interactive tool with access to other resources, special reports on NHLBI news, and updates on important research.

The adept designers who established new graphic standards for the NHLBI are responsible for this revitalized publication. They have worked to ensure that *HeartMemo* has a "visual voice"—a voice you will recognize with each issue, a voice you will trust to lead you to the information you want and need. Illustrations highlight and expand the articles.

The colors make the information easier to find. Graphic representations of information make complex information more digestible. The new design gently guides you through *HeartMemo*. We highlight contents on the front, and the graphics serve as a map to where you want to go. The sidebars will identify where you are in the issue. Favorite sections will be found in the same place each issue.

We know that you have deadlines to beat, patients to care for, and children to take to soccer practice. Your time is precious. So we have worked hard to make *HeartMemo* practical, easy to read, and filled with the vital information you need.

RSVP

HeartMemo has been redesigned in response to reader suggestions, and it will evolve in response to readers' changing needs. Write me—tell me what you think about the graphic redesign and the content. Tell me what you like, dislike, want, and need. Be blunt, if you like. I know you are busy, but if you have the time or inclination, write me a letter. Send your ideas for future issues, things you hope we never do again, anything. Just let me hear from you. Also, be sure to resubscribe. ■

Pamela E. Anderson
NHLBI Information Center
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Bethesda, MD 20824-0105

HeartScience

Dietary Approach Stops Hypertension

A low-fat diet that is high in vegetables, fruits, and low-fat dairy foods significantly and quickly lowers blood pressure, according to a national study funded by the NHLBI.

The study examined the effect on blood pressure of whole dietary patterns, rather than of individual nutrients, in 459 adults with systolic blood pressure of less than 160 mmHg and diastolic blood pressure of 80 to 95 mmHg.

The effects of three diets were compared, including a control diet similar in nutrients to what many Americans consume. The other two diets, the fruit and vegetable diet and the combination diet, both had 8 to 10 servings of fruits and vegetables. The combination diet also had two to three daily servings of low-fat dairy foods. All three diets had 3 grams of sodium. None of the diets was vegetarian or used specialty foods containing fat substitutes.

The combination diet produced the largest reduction in blood pressures. Two weeks into therapy, results were seen in men, women, whites, and minorities. Results were maintained over the 8-week course of the trial.

The diet worked especially well for those with high blood pressure, producing reductions similar to those from single-drug therapy. It also proved effective for people with high-normal blood pressure, who are at a substantial risk for hypertension. Blood pressure reductions occurred without changes in weight or reducing consumption of alcohol or sodium.

The DASH diet (see page 25) added to other lifestyle recommendations should help prevent hypertension and reduce some persons' need for medication to control it.

Results of this study, which also received support from the National Center for Research Resources and the Office of Research on Minority Health, were published in the *New England Journal of Medicine* on April 17, 1997. ■

Aggressively Lowering LDL Reduces Progression of Atherosclerosis for Bypass Patients

Lowering low-density lipoprotein (LDL) cholesterol to below 100 mg/dL slows the progression of atherosclerosis in the grafted vein, according to NHLBI-funded scientists.

Like coronary arteries, vein grafts also can become blocked with accumulations of fat and cholesterol. The Post Coronary Artery Bypass Graft (Post CABG) study found that bypass patients who were treated with high doses of cholesterol drugs, achieving greater reductions in their LDL cholesterol, had significantly fewer grafts per patient that showed progression of atherosclerosis than did patients treated with a moderate regimen. Findings from this study are consistent with other trials and consistent with recommendations of the National Cholesterol Education Program.

The study was published in the *New England Journal of Medicine* on January 16, 1997. ■

Digitalis Reduces Hospitalization for Heart Failure

Digitalis, one of the most commonly used heart drugs, has no effect on survival of heart failure patients but eases symptoms, helping to keep them out of the hospital.

The prevalence of heart failure, which occurs when the heart loses its ability to pump, has been increasing in the United States. Hospitalization is often required because of severe symptoms, including difficulty in breathing, swelling, and abnormal heart rhythms. Digitalis helps the heart pump by increasing the force with which its muscle cells contract.

A recent NHLBI-supported study of 6,800 men and women in 302 clinics in the United States and Canada showed that patients on digoxin had 6 percent fewer hospitalizations than those on placebo.

"It is disappointing that digitalis was not found to prolong survival," says Dr. Claude Lenfant, NHLBI director, "but these results give doctors important guidance about the drug's role in the treatment of heart failure."

The study was published in the *New England Journal of Medicine* on February 20, 1997. ■

Early Salt Intake Shown To Affect High Blood Pressure

Early sodium intake may have an impact on blood pressure and could influence whether high blood pressure develops later in life, according to a research team in the Netherlands. They report that dietary levels of salt

during formative months and years appear to be "important determinants" of blood pressure.

Researchers at Rotterdam's Erasmus University Medical School retested the blood pressures of 167 children who, as infants 15 years earlier, had been in a trial to determine the effects of sodium lowering on blood pressure during the first 6 months of life. The children who had been on a low-sodium diet and who had lower blood pressures at the end of the 6-month study still had lower blood pressures when reexamined 15 years later, compared with children who had received "normal" amounts of sodium.

The study is published in the April 1997 issue of *Hypertension*. ■

Another Look at Aspirin and the Heart

Hardened and narrowed arteries that precipitate heart attacks and strokes may be caused by inflammation in blood vessel walls, according to a new study by investigators at Brigham and Women's Hospital in Boston.

The study offers evidence that aspirin's usefulness in preventing heart attacks and strokes is related to its ability to reduce inflammation, not to its ability to prevent blood clots, as scientists have presumed.

This research does not dispute that high cholesterol and other standard risk factors contribute to the risk of heart attacks and stroke but suggests that inflammation may exist before atherosclerosis and is involved in the progression of heart disease.

Researchers measured C-reactive protein—a marker for inflammation—in 1,086 men. All subjects were tracked for more than 8 years after being randomized to receive aspirin or a placebo. Baseline C-reactive protein levels were higher among the men who later had a heart attack or stroke than among those without vascular events. Aspirin reduced the risk of a heart attack by 56 percent in men with high levels of C-reactive protein but not at all in men who had low levels.

The researchers suggest in an interview published in the *Washington Post* on April 3, 1997, that the "ebb and flow of this inflammatory process is as important as the cholesterol levels." However, the researchers also caution that C-reactive protein levels are not perfect indicators of risk because levels are normal or low in many people who later have heart attacks. C-reactive protein levels also go up in response to many factors, such as cigarette smoking.

The study was reported in the *New England Journal of Medicine* on April 3, 1997. ■

HeartWorks

Going for the Gold

Leaders from the field of health promotion and education gathered in April 1996 to debate the economic value of their efforts and to examine the costs and benefits of preventive interventions.

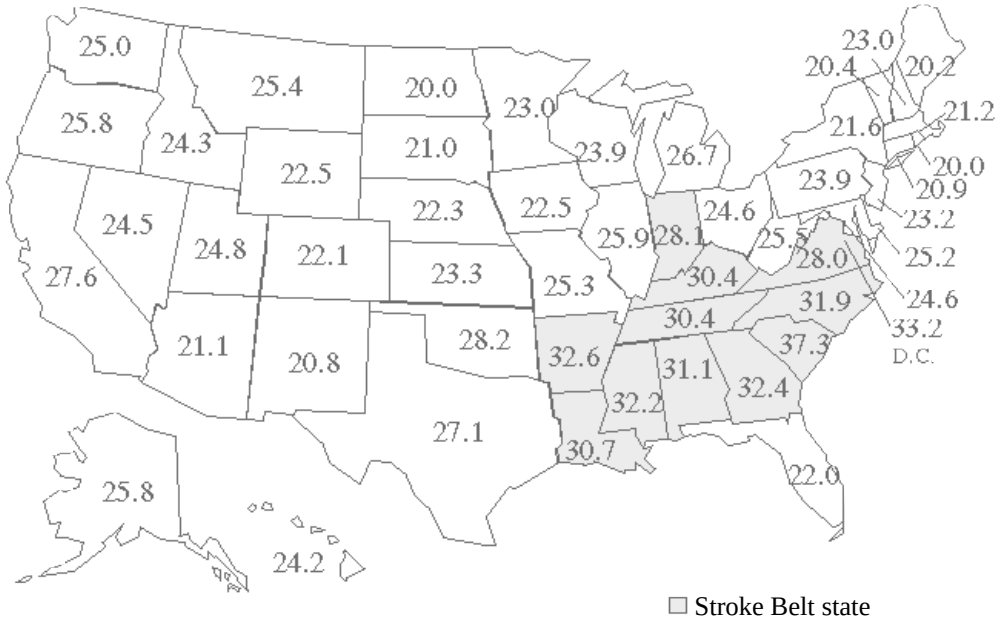
The National Conference on Health Promotion and Health Education, "Going for the Gold: Economic Dynamics of Health Education and Health Promotion," held in Washington, DC, on April 26-28, 1996, was the forum for these activities.

A full conference report is available on the NHLBI Web site (http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm). The report contains highlights of a number of presentations, including the following:

- "All That Is Gold Does Not Glitter: The Economics of Health Education and Health Promotion," keynote address by Dr. Kenneth Warner, University of Michigan School of Public Health;
- "Taking Advantage of Advanced Communications Technologies for Patient Education," by Dr. Victor J. Strecher, University of Michigan Comprehensive Cancer Center;
- "Latino Community Alliance Working for Heart Health: Cardiovascular Disease Prevention and Outreach Initiative," by Dr. Elmer Huerta, Washington Cancer Institute, Washington Hospital Center; and
- "Wringing the Chicken's Neck: Dollars and Sense and Health Promotion," by Dr. James S. Marks, Centers for Disease Control and Prevention. ■

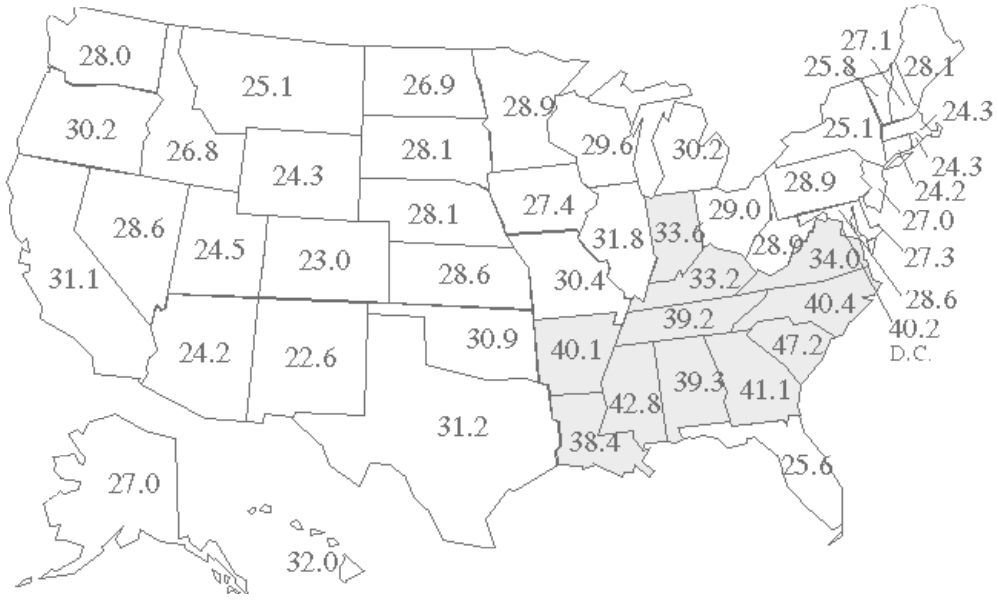
Heart Facts

3-Year Age-Adjusted Stroke Mortality* for Females by State: 1989-91



*Deaths per 100,000 population
Source: U.S. Vital Statistics, 1989-91.

3-Year Age-Adjusted Stroke Mortality* for Males by State: 1989-91



*Deaths per 100,000 population
Source: U.S. Vital Statistics, 1989-91.

Mark Your Calendar

CVD Conference Sets Stage for Next Millennium

If you are interested in heart health, there is only one place to be next February 19 through 21—The Embarcadero Center, San Francisco. The national conference, "Cardiovascular Health: Coming Together for the 21st Century," will draw health care professionals from around the country. In recognition of the NHLBI's 50th anniversary, the opening session will look at the progress made in fighting cardiovascular disease (CVD) over the past five decades.

The closing plenary session will suggest a collaborative strategy for progress in cardiovascular health—a blueprint for the next millennium.

The conference will also review current knowledge and address significant global transformations that are shaping responses to CVD. Members of sponsoring organizations—NHLBI and its education programs, the California Cardiovascular Disease Prevention Coalition, and the Cardiovascular Disease Outreach, Resources, and Epidemiology (CORE) Program—have joined representatives from research, clinical practice, public health, prevention programs, health communications, and other multidisciplinary areas to design sessions on reducing the risk of CVD and improving the lives of Americans in the next millennium. Dr. Stephen P. Fortmann of the Stanford Center for Research in Disease Prevention is chair of the program planning committee.

Sessions are organized around eight important cardiovascular health topics. Each will be discussed in a major session, and related smaller sessions and workshops will add variety and depth to the program. Invited speakers and abstract presentations will expand on various aspects of the eight major topics:

- Delivering Health—Changing Systems, Changing Roles
- New Directions in Preventing and Treating Obesity and in Promoting Physical Activity
- Communicating Cardiovascular Health: People, Programs, and Policies
- The Continuing Challenge of High Blood Pressure Control in the 21st Century
- Cholesterol Control: A Key to Preventing Atherosclerosis in Our Time
- Coming Together for Heart-Healthy Communities
- The Cardiovascular Health of Women: Increased Awareness, New Knowledge
- New Directions in Managing Multiple Risks

Potential presenters are invited to submit material on a broad range of issues.

The preliminary conference brochure, which includes a call for abstracts, a registration form, and program highlights, has been mailed to a large audience, including *HeartMemo* subscribers. Conference information and a printable registration form are available on the NHLBI Home Page. Select the icon for the NHLBI 50th anniversary (see page 22 for more information).

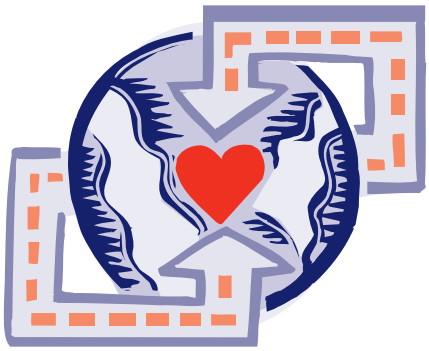
The University of California at San Francisco is maintaining details of the program on a Web site: http://cme.ucsf.edu/courses/NHLBI.htm.

Electronic conferencing, via e-mail, will be available. Electronic registrants will receive transcripts of all major presentations by e-mail shortly after the conclusion of each session. They will also be signed on to a private electronic mailing list that will facilitate electronic discussions of issues raised by the conference speakers.

Conference sponsors will provide a satellite uplink for the first half-day of the meeting. Organizations with access to a viewing facility can host a videoconference for local health professionals or customize a videoconference by adding local learning opportunities and networking at their site.

If you are interested in hosting a downlink site, send an e-mail to Mr. Keith Hewitt, NHLBI, by September 1, 1997 (khewitt@gwgate.nhlbi.nih.gov). Describe your facility, the estimated audience size for the event, and any other details about what you are planning.

Additional copies of the brochure can be obtained from Mr. Greg Oliva, Conference Planning Manager, CORE Program, California Department of Health Services, Mail Station 725, P.O. Box 942732, Sacramento, CA 94234-7320; e-mail goliva@hw1.cahwnet.gov. ■



HeartNet

New items are being added to the NHLBI Web site all the time. For instance, take a look at these new items:

- Each NHLBI education program has its own Web site on the NHLBI Web pages. From the NHLBI home page, select "Other NHLBI Components." Then, select Office of Prevention, Education, and Control to see the menu of information.
- The current list of publications is available by selecting "Educational Materials Catalog" from the NHLBI home page under "Health-Related Information."
- Special information on the NHLBI 50th anniversary can be seen by selecting the new icon on the NHLBI home page.
- The full text (Spanish and English) of eight easy-to-read brochures on heart health is available by selecting "Other Cardiovascular Information" from the NHLBI home page. Then select "Patient/General Public." Scroll through the list that appears until you see the listing for the brochures.
- A full report of the Stroke Belt Initiative is available through the NHLBI home page.
- As *HeartMemo* was going to press, the new Web site for the NHLBI Information Center was under construction.

In response to your requests, following is a list of interesting Web sites that have come to our attention. We neither make claims regarding content nor are responsible for content. You are urged to use the standard precautions when accessing information from electronic sources. When you discover other sites that may be of interest to your colleagues, let us know about them.

Net Medicine

www.netmedicine.com

This searchable, manually indexed database of medical Web sites has video resources, CME credits, MRI scans, free MEDLINE access, and links to patient education materials.

Health Communication Resources/Emerson College and Tufts University School of Medicine

www.emerson.edu/acadepts/cs/healthcom/resources/home

This site offers a primer on the role of communication in disease prevention and health promotion and on models, theories, and practices of communication. It also features a public health campaign and other links.

Obesity and Weight Control

www.weight.com

A private physician, Dr. Michael D. Myers, discusses obesity issues including drug therapy, dietary options, eating disorders, and frequently asked questions.

American Heart Association

www.amhrt.org

This is the official Web site for the American Heart Association. It contains comprehensive information for patients and health care professionals, including a heart and stroke guide, as well as search capabilities.

National Stroke Association: Stroke Center Network

www.stroke.org

This site offers opportunities for alliances among clinicians, researchers, and health professionals focused on education, support, and collaboration within communities. It gives directions for joining the program and discusses how to decrease stroke morbidity and mortality through available community facilities. ■

NHLBI Home Page

The NHLBI home page can be accessed easily through the NIH home page using www.nih.gov.

Then select "Institutes" and choose NHLBI. For direct access, use www.nhlbi.nih.gov/nhlbi/nhlbi.htm.

HeartSources

Begin Healthy Traditions

Three new cooking videos in the "Healthy Traditions Cooking Series" are available from the FoodWise Project of the Contra Costa County Community Wellness and Prevention Program. In each of the videos—The Flavors of Mexico, Asia, and African America—chefs are featured who show how to shop for and cook traditional recipes from the different cultures. Fat-reducing tips are shown, such as removing the skin and fat from chicken and using applesauce instead of oil in baked goods. Each 30-minute video costs $12 and comes with reproducible recipes and a brochure with the nutritional content of each dish. All three programs are available on one 90-minute video for $20. To order, contact Community Wellness and Prevention Program, 597 Center Avenue, Suite 115, Martinez, CA 04553; telephone (510) 313-6808. ■

Time for a Heart to Heart

The Alliance for Aging Research and the National Council on the Aging have developed a free kit—"Is It Time for a Heart to Heart?"—for groups interested in educating older adults about congestive heart failure (CHF).

The kit includes a leader's guide with instructions for conducting an educational program on CHF, a 15-minute video, easy-to-read consumer brochures, and an advertising poster.

To order, contact Alliance for Aging Research, 2021 K Street, NW, Suite 305, Washington, DC 20006; telephone (202) 293-2856. ■

Even a Little Bit Less Is Better

The Center for Science in the Public Interest (CSPI), a nonprofit organization "dedicated to improving the public's health," is spearheading a new campaign to reduce the consumption of saturated fat. The 1% or Less Campaign encourages adults and children over 2 years old to switch from whole or 2% milk to 1% or skim milk. This small change significantly reduces saturated fat with no decrease in the amount of protein, calcium, or vitamins.

Determining which items are really low in fat will soon be easier. By January 1998, labels of milk cartons will change: 2% milk will be renamed "reduced-fat," 1% will keep the designation of "low-fat," and skim milk may be called "fat-free." New labeling regulations, recently passed by Congress, will also apply to cottage cheese and sour cream but not to yogurt. The CSPI hopes that the labeling change will result in better informed consumers and an increase in the consumption of skim milk and 1% milk.

To help community and State organizations implement 1% or Less Campaigns, the CSPI has published *A First Step Toward Healthy Eating: The 1% or Less Handbook,* which comprehensively describes how to plan, implement, and evaluate a community-wide health education campaign.

It has 300 pages of model letters, handouts, camera-ready logos, advertisements, fact sheets, milk taste-test protocols, evaluation forms, press releases, and other tested materials to help jumpstart campaigns and enable organizations to focus on implementation.

For more information or to join the effort, contact the CSPI, 1875 Connecticut Avenue, NW, Suite 300, Washington, DC 20009; telephone (202) 332-9110; e-mail mwootan@essential.org. ■

Health Literacy Project

The Health Promotion Council of Southeastern Pennsylvania publishes many materials designed for low-literacy audiences. New high blood pressure materials include *You May Have It and Not Know It* and *Take Your Blood Pressure at Home.* Materials on stress, diet, exercise, and smoking are also available.

New materials written in English and Spanish include *Living With Diabetes (Viviendo Con Diabetes)* and several diabetes nutrition guides. For ordering information, contact the Health Promotion Council of Southeastern Pennsylvania, Inc., 311 South Juniper Street, Suite 308, Philadelphia, PA 19107-5803; telephone (215) 546-1276; e-mail hlphpc@libertynet.org. ■

New at the NHLBI Information Center

Catalog Update

Not only is *HeartMemo* new and improved, but the *National Heart, Lung, and Blood Institute Educational Materials Catalog* is being redesigned, too. Two versions of the catalog will be published: one for professionals and one for the general public. Each contains complete descriptions of publications available from the NHLBI Information Center. The catalog for professionals contains listings of all available publications and prices for bulk quantities of the public education publications. It will be mailed to all *HeartMemo* subscribers in late summer. The catalog for the public has listings of specific publications and will be mailed to individuals who contact the center for information.

In the catalog, you will notice that a "cost-recovery fee" is applied to most products. This means that publications will have a minimal cost. In the face of increased printing costs, this small charge is essential to ensure that the publications you want and need are always available. Quantities will not be restricted—large quantities of in-print publications will be readily available—you can get as many as you need. When popular items run out, the fees will be used to print more of the most popular publications.

Electronic versions of many NHLBI publications are now available on the NHLBI Web site. You can view them online or download them for printing or future reference.

Fact Sheet: Restless Legs Syndrome (RLS). Another sleep disorder, RLS is characterized by unpleasant sensations in the legs, described as creeping, tingling, or pulling. These sensations usually occur in the calf but have been reported along the entire leg. People who have RLS have trouble falling and staying asleep. This 4-page fact sheet reviews causes, diagnoses, and treatments. (NIH Publication No. 96-3645)

Fact Sheet: Narcolepsy. A chronic sleep disorder with no known cause, narcolepsy is characterized by excessive and overwhelming daytime sleepiness, even after adequate nighttime sleep. This 4-page fact sheet explains basic information, symptoms, who is at risk, and treatments and offers advice on how to cope with this unusual disorder. (NIH Publication No. 96-3649)

Fact Sheet: Sickle Cell Anemia. This new fact sheet reviews this inherited blood disorder characterized by chronic anemia and episodes of pain. Caused by a hemoglobin gene mutation that developed centuries ago, sickle cell anemia occurs in 1 out of 12 African Americans. This 6-page fact sheet describes the causes and symptoms of this condition, how it is detected, how it is treated, and how to cope with the diagnosis. (NIH Publication No. 96-4057)

Controlling High Blood Pressure: A Woman's Guide. More than 50 million Americans have high blood pressure, including more than half of women over the age of 60. This 17-page guide explains how high blood pressure affects health and tells how high blood pressure can be prevented with simple lifestyle changes and controlled with lifestyle changes or medication, if needed. Information on commonly used medications as well as a handy table that lists the generic names of high blood pressure medications are included. A chart is provided for recording blood pressure readings. (Order No. 55-820)

The DASH DIET • Sample Menu • *based on 2,000 calories/day*

Food	Amount	Servings Provided
Breakfast		
orange juice	6 oz	1 fruit
1% low fat milk	8 oz (1C)	1 dairy
corn flakes (with 1 tsp sugar)	1 C	2 grains
banana	1 medium	1 fruit
whole wheat bread (with 1 Tbsp jelly)	1 slice	1 grain
soft margarine	1 tsp	1 fat
Lunch		
chicken salad	3/4 C	1 poultry
pita bread	1/2 slice, large	1 grain
raw vegetable medley:		
carrot & celery sticks	3-4 sticks each	1 vegetable
radishes	2	
loose-leaf lettuce	2 leaves	
part skim mozzarella cheese	1.5 slice (1.5 oz)	1 dairy
1 % low fat milk	8 oz	1 dairy
fruit cocktail in light syrup	1/2 C	1 fruit
Dinner		
herbed baked cod	3 oz	1 fish
scallion rice	1 C	2 grains
steamed broccoli	1/2 C	1 vegetable
stewed tomatoes	1/2 C	1 vegetable
spinach salad:		
raw spinach	1/2 C	1 vegetable
cherry tomatoes	2	
cucumber	2 slices	
light Italian salad dressing	1 Tbsp	1/2 fat
whole wheat dinner roll	1 small	1 grain
soft margarine	1 tsp	1 fat
melon balls	1/2 C	1 fruit
Snacks		
dried apricots	1 oz (1/4 C)	1 fruit
mini-pretzels	1 oz (3/4 C)	1 grain
mixed nuts	1.5 oz (1/3 C)	1 nuts
diet ginger ale	12 oz	0

Total number of servings in 2,000 calories/day menu:

Food Group	*Servings*
Grains	= 8
Vegetables	= 4
Fruits	= 5
Dairy Foods	= 3
Meats, Poultry, & Fish	= 2
Nuts	= 1
Fats & Oils	= 2.5

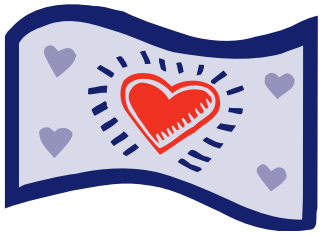
TIPS ON EATING THE DASH WAY:

- ❤Start small. Make gradual changes in your eating habits.
- ❤Center your meal around carbohydrates, such as pasta, rice, beans, or vegetables.
- ❤Treat meat as one part of the whole meal, instead of the focus.
- ❤Use fruits or low fat, low-calorie foods such as sugar free gelatin for desserts and snacks.

REMEMBER! *If you use the DASH diet to help prevent or control high blood pressure, make it part of a lifestyle that includes choosing foods lower in salt and sodium, keeping a healthy weight, being physically active, and, if you drink alcohol, doing so in moderation.*

DASH is also online at http://dash.bwh.harvard.edu.

This research was funded by the National Heart, Lung, and Blood Institute (NHLBI), with additional support by the National Center for Research Resources and the Office of Research on Minority Health, all units of the National Institutes of Health.To learn more about high blood pressure, call 1-800-575-WELL or visit the NHLBI website at http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm.



HeartFunds

West Virginia Rural Health Education Partnerships

Working with grants from the Governor's Office and the W.K. Kellogg Foundation, the West Virginia Rural Health Education Partnerships program places health care education students in all disciplines on rural rotation throughout the State. The program is a cooperative effort among the three health care education institutions and several rural clinics and hospitals in West Virginia to improve the quality of rural health education and delivery and to retain health care education graduates. For more information, view the Web site at http://ruralnet.marshall.edu/wvrhep/wvrhep.htm. ■

Robert Wood Johnson Foundation Awards Grant to Wisconsin AHEC System

The Robert Wood Johnson Foundation has awarded the Wisconsin Area Health Education Center (AHEC) System a $200,000 planning grant to increase the supply and distribution of nurse practitioners, certified nurse-midwives, and physician assistants in underserved areas.

The new initiative, "Partnerships for Training," will develop partnerships between educational institutions, public and private agencies, and employers of health professionals to develop community sites that will allow students to be trained in these professions while residing in their home communities.

The 15-month planning phase will be guided by an advisory panel of community-based faculty, community leaders, and academic employers. The Wisconsin AHEC System is a partnership between the University of Wisconsin Medical School in Madison and the Medical College of Wisconsin in Milwaukee and is 1 of only 12 consortia in the United States to win funding from a nationwide competitive process. For more information, contact Ms. Barbara L. Nichols, Project Director, Wisconsin AHEC System; telephone (608) 263-2126. ■

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Send your order, and if applicable, a check or money order for the handling to:
NHLBI Information Center
P.O. Box 30105
Bethesda, MD 20824-0105

The Information Center can also be reached by phone at (301) 251-1222 or by fax at (301) 251-1223.

SUBSCRIBER REGISTRATION

The National Heart, Lung, and Blood Institute Information Center is updating its mailing list. If you would like to continue to receive information, such as *HeartMemo,* you must complete this form and return it by July 25, 1997. If we do not receive your information by July 25, 1997, we will assume you do not wish to be included in future mailings.

❒ Yes, I would like to continue receiving *HeartMemo.*

To help us better understand your work setting and information needs, please check off the appropriate boxes below.

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